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ABSTRACT

The origin of effective schools research (ESR) is discussed in the context of a review of the pertinent literature. Debates over this topic have involved impacts on student achievement, methodology, the allegations of the Coleman report, and various effective school models. The Coleman Report (1966) concluded that family background was the dominant determinant of student achievement throughout the school years. Other researchers have concluded that schools are the predominant factor in student achievement. In recent years, effective schools researchers have tended to use Edmonds' correlates and have opted for a combination of qualitative and quantitative statistics. The Edmonds' model encompasses five correlates: (1) school climate; (2) leadership; (3) teacher expectations; (4) purpose; and (5) student progress assessment. Methodological issues that have been debated include the use of qualitative versus quantitative analysis, use of standardized tests, sampling procedures employed, and the unit of analysis. It is concluded that effective school researchers have made considerable gains in the past 20 years in resolving debates, controversy, and fears of educators relative to ESR. The consistency in factors used and more balanced research studies have recently given ESR a sense of respect. Such progress has also advanced the whole of educational research. Researchers now have a clearer understanding of aspects that can improve schools, student achievement, and learning. The unresolved disputes will continue to improve ESR and educational research in general. A 35-item list of references is included. (TJH)

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EFFECTIVE SCHOOLS RESEARCH: TWENTY-YEARS OF DEBATE

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ABSTRACT

Effective schools research has gone through 20 years of attack and counter-attack. Debates have been raged over what impacts student achievement and to what degree. The methodology used has also been shrouded in controversy. But, these debates are beginning to come to a close. Compromise seems apparent.

The present paper discusses the origins of effective schools research. This encompasses the allegations of the Coleman report, the various effective school models, qualitative versus quantitative analysis, and the use of standardized tests.

In recent years, researchers have tended to use Edmonds' correlates and have opted for a combination of qualitative and quantitative statistics. The consistency in factors used and more balanced research studies have given effective schools research a respect that has only been recently earned.

EFFECTIVE SCHOOLS RESEARCH: TWENTY-YEARS OF DEBATE

Effective schools research began with the debate over whether or not schools affected students achievement. In the Coleman Report (1966), the findings were that family background was the predominant determiner of student achievement. Coleman also found that the relationship between family background and achievement did not diminish through years of schooling. These findings were also supported by Flanagan and Cooley (1966) and Jencks et al. (1972).

Researchers such as Brookover, Lezotte, and Rutter disagreed with these findings. These three researchers, along with many others, have investigated factors (or correlates) affecting student achievement. These researchers felt that schools did make a difference and could affect student achievement.

The Correlate Debate

In the past twenty years there have been several correlate models proposed. Included in the list of educators creating models are Edmonds, Kelwyn, Brookover, Rutter, and Phi Delta Kappa to name a few. According to D'Amico (1982), each of these models list different correlates. Although there is some overlap in the correlates for these models, confusion is created by the various correlates and their operationalized definitions of the correlates.

Brookover and Lezotte (1979) determined that there were ten correlates for determining an effective school. These correlates emphasized the improvement of basic skills. The correlates addressed improving standardized test scores (such as mathematics and English), parental contact and involvement, instructional leadership, et cetera. For Brookover, the effectiveness of the school rested on the staff and principal to improve their attitudes, expectations, and practices.

Rutter et al. (1979) identified seven characteristics of an effective school. Rutter's list emphasized the environment, expectations, and feedback. D'Amico (1982) found that Brookover and Lezotte's correlates were similar to Rutter's but addressed effective schools from slightly different perspectives.

Edmonds (1981) also developed a set of correlates for effective schools. These correlates became the best known and most often used. Ralph and Fennessey (1983) credits this popularity to Edmonds' tendency to sound almost evangelical which stimulated educators to become involved in the "Effective Schools Movement". Thus, Edmonds' correlates have become well known. This is not to say that Edmonds' model is any better or worse than any other but rather is frequently use because of Edmonds' popularity.

Edmonds' model contains five correlates. Edmonds (1979) identified his correlates as: school climate, leadership, teacher expectations, purpose, and monitoring student progress.

The Kelwyn incorporates the five correlates of Edmonds plus a parent involvement correlate.

Phi Delta Kappa (1980) and Kelwyn (1982) developed sets of correlates, but have not seen wide use. But, these two models are just as valid as any other developed to this point.

Brookover and Lezotte (1979), Edmonds (1981), Phi Delta Kappa (1980), and Rutter et al. (1979) all have slightly unique views of what an effective school should be. There is little consensus on the characteristics of an effective school from the stated correlate names to the descriptive components that actually operationalize the correlate names. To further complicate the matter, recent studies (Hallinger and Murphy, 1986; Teddlie and Stringfield, 1985) indicate that the correlates of effective schooling may be context specific.

This all leads to confusion as to which effective school model should be used if any at all. The tendency seems to be toward the use of the Brookover and Lezotte model or the Edmonds model. These are the two best documented models. The advantage to Brookover and Lezotte's model is the fact that a substantial amount of research has been performed on the correlates by Brookover and others (see appendix A for references). But, due to the name recognition, Edmonds has become the leader and his model has followed along.

The Methodological Debate

Since the inception of effective schools research, the research methodology used has come under tremendous criticism. Inherent problems have been cited by Gray (1981), Cuban (1983), Ralph and Fennessey (1983), and Rowan, Bossert, and Dwyer (1983). Concerns have been expressed over the statistical procedures employed, as well as design flaws. The design flaws include: the measures used, sample sizes, unit of analysis, and the lack of qualitative techniques.

In 1981, Gray scorned the methodological techniques used in school effectiveness studies. Gray was concerned with several neglected key areas of effective school literature.

These include: better evidence for the size and stability of school effects; closer attention to the values and assumptions underlying particular measures of outcomes, as well as more research into the relationship between them; more appropriate strategies for controlling for differences in intakes to different schools; larger samples of schools; and more open-ended approaches to the study of differences in school progresses, employing qualitative techniques to complement quantitatively-defined frameworks (Gray, 1981, p. 50).

Rowan et al. (1983) also leveled several criticism against methodological and conceptual frameworks employed in effective schools research. These criticisms included the narrow focus on basic skills outcomes, unstable measures over time, effectiveness measures that are neither valid nor reliable, problems with effect size and the relationship between school variables, problems of casual ordering, and problems of generalization. The implication for effective school researchers is

First, current research provides a poor model of how to assess school effectiveness. In addition, practitioners should avoid measures of effectiveness that are unstable and unreliable (Rowan et al., 1983, p. 30).

These are a few of the concerns that have been expressed. These researchers lead the debates over standardized testing, statistical procedures employed, the use of qualitative statistics, sampling procedures employed, and the unit of analysis.

The Use of Standardized Tests

Throughout the past twenty-years of effective schools research one problematic methodological practice under debate is the selection of instruments. This practice involves the use of standardized tests and the common use of normal curve equivalency scores (NCE).

Standardized tests have been used by Weber (1971), Wellisch et al. (1978), Hallinger and Murphy (1986), Andrews and Soder (1987), and Schmitt (1988b). These tests have been used to determine student achievement because standardized tests purport to evaluate student achievement. Secondly, standardized tests are used because they tend to show more variance than criterion-referenced tests (Madaus et al., 1979).

But, many opponents argue that standardized tests do not show the "true" performance of the students. Not all students take standardized test well, since part of taking these tests is testwiseness. Additionally, standardized tests may not measure the actual objectives of study since standardized tests are national tests.

The use of NCEs are supported by those researchers who encourage the use of standardized tests. These scores can be derived as one of the reported scores from standardized tests and can be statistically manipulated since equal intervals are established. NCEs and standardized tests can be used to establish grade equivalent performance to transcend means and standard deviations but understand how many and what students are actually at least on grade level.

On these matters, common ground is being established. Both standardized testing and objective testing are encouraged in effective school research. This is allowing researchers to narrow the focus to determine if differences or lack of differences is a common base of items not taught or the items

are simply not known by one or both groups. This mapping of objectives taught and test items provides more evidence of "true achievement".

The Use of Statistical Procedures

In recent years, the debate on the type of analysis has persisted. Slowly, there has been a move from the use of univariate analysis to multivariate analysis. The univariate tests (such as multiple t-tests or ANOVAs) still continue to be used in recent years by Wellisch et al. (1978) and Andrews and Soder (1987). A movement has begun to use more mathematically sophisticated analysis with respect to the correlation of standardized test scores (Brookover et al., 1979; Teddlie et al., 1984; Schmitt, 1988b).

Several researchers have argued the need for multivariate analysis. One of the most outspoken proponents is Thompson (1986). Thompson (1986) argues that the statistical procedures should be as complicated as the environment in which the data was collected.

Thompson (1986) also argues that using multiple analysis of variance tests instead of one multivariate analysis of variance test, for example, would increase the experimentwise error rate. An analysis using different dependent variables, which are partly correlated or not correlated at all, would artificially increase the probability for achieving statistical significance (McMillan & Schumacher, 1984; Sowell & Casey,

1982). Thompson (1986) also explains that the actual experimentwise error rate can not be calculated unless the variables are perfectly correlated (the minimum above) or perfectly uncorrelated (the maximum above). Thus, the use of multivariate statistics is positive and logical.

The Use of Qualitative Analysis

Throughout the better part of the twenty-years, the majority of the effective schools research studies relied solely on quantitative data and analysis. This was true for Coleman (1966), Flanagan and Cooley (1966), and Jencks et al. (1972). One of the argument leveled against these studies and early effective schools studies was that much of the quantative data was cosmetic number count of material (i.e. teacher-student ratio, number of library books, circulation of library books, number of microscopes per biology lab).

Although the data collected is much improved (i.e. focus on standardized tests, on socio-economic status, type of library book and purpose of circulation) there are still many criticisms of the methodology. As with the argument against the use of univariate statistics, the same framework is used to contend that qualitative analysis should be a part of effective school studies (Gray, 1981).

In recent years, a discussion on the adequacy of data collection techniques has resurfaced. The over reliance on surveys and other quantitative methods have been criticized.

As a response studies by Newberg and Glatthorn (1982), Nelson (1983), and Donmoyer (1985) which relied exclusive on qualitative research methodology have become more common. These research studies, more ethnographic in nature, were designed to determine the characteristics of the award-winning or "effective" schools.

More of a middle ground between the two extremes appear to be both practical and superior to either of the methods alone. A combination of both quantitative and qualitative analysis is becoming popular. Studies, such as Shoemaker and Fraser (1981) and Schmitt (1988a), illustrate the balance in quantative analysis between schools and qualitative analysis within a school.

The balance of the two methodologies allows for multiple perspectives of a given educational aspect. In effect, triangulation can take place with a combination of surveys, interviews, and observations. The research study would collect data from different levels of analysis as well as methods of data collection. This allows for clearer insights of the reality of the school.

Sampling Procedures Employed

Debate has arisen as to which method, random sampling or case study, is the best method. Brookover and Lezotte (1979), Edmonds (1979), Evans (1988), and Teddlie et al. (1987) have taken the random sampling approach to studying effective

schools. Other researchers, such as Weber (1971), Newberg and Glatthorn (1982), Andrews and Soder (1987), and Wimpelberg (1986) have studied effective schools through case studies.

Weber (1971) suggested the best method for studying most of the variables associated with effective leadership is the case study. Wimpelberg (1986) described the procedures in case studies. Extensive interviews, observation of instruction, family background analysis, monitoring school movement, hiring and firing, and basics skills are frequently addressed (Wimpelberg, 1986). This seems to be the means of studying the most variables at one time, although it is impossible to study all variables.

The trend is toward more case studies. This is not precluding the use of quantitative statistical procedures nor does it prohibit multiple schools or districts to be in the study. The case studies focus in on the individual schools for the bulk of the analysis and discussion, but there can be, and often is, some analysis and/or comparisons across schools or districts. No conclusions as to which method of sampling is best. To this point, there is no clear preference or superiority for either sampling procedure. For now, there will be a dual system of sampling, which is also acceptable.

The Unit of Analysis

A debate that influences both the use of statistical procedures and the sampling procedures is over what is the most

appropriate unit of analysis for evaluation studies and school effectiveness studies. The most common units discussed are the individual student, the classroom, and the school. The two most applicable in the majority of the studies are the student and the classroom. The school is often used with case studies and for cross-school comparisons, but may also be used in sampling studies.

Burstein (1980) concluded that most educational evaluations are concerned with the treatment relative to the school, and thus the unit of analysis should be the school. Cronbach (1982) states that "an aggregate analysis is far more credible than an analysis that ignore collectiveness" (p. 186). The aggregates Cronbach refers to are school means. Sirotnik and Burstein (1985) stated that the smallest unit of analysis, not grouping, is one of the most often used and least often relevant.

On the other hand, Burstein (1980) stated that students react as individuals and that theoretical arguments concerning effects of educational structure is based on student outcomes. In addition, Burstein (1980) explains that "aggregation typically inflates the estimate of background and outcomes and decreases the likelihood of identifying effective teacher-classroom-school characteristics and practices" (p. 181). Finally, Cronbach (1982) also defends using individuals since effects may appear when individual membership is considered while grouping is considered when these effects would not be

uncovered.

A clear cut consensus on the proper unit of analysis has not emerged. Burstein (1980) and Cronbach (1982) have presented both sides of the issue without drawing conclusive recommendations. This is probably because there is no definitive rules that can explain which unit of analysis is appropriate all the time. The situation needs to govern the unit of analysis. But, there are tendencies in effective school studies to use more than one unit of analysis in the study (Schmitt, 1988b; Teddlie et al., 1987).

Unresolved Debates

Researchers have sounded additional cautionary notes. Cuban (1983) discussed some of the problems with effective schools research in an article for Phi Delta Kappan. Cuban felt that after twenty-years of research, no one knew how to create effective schools, the language used in the research was fuzzy, the effectiveness concepts in most studies were narrowly tied to tests of low-level skills in mathematics and reading, and most research has been done in elementary schools making the application of findings to secondary schools difficult. Cuban (1983) concluded that the increase use of standardized tests has led to a narrow curricula agenda.

Many of Cuban's remarks are still unresolved. The debates on the language used and method to create an effective school

will probably continue for many more years. Until the language used is standardized, there seems to be little hope for the latter. Every time a researcher does an effective school study, he reinvents the wheel with having to define five or more pages of terms to allow the reader to know his position on the various terms.

The other debates of: narrow curricula, over use of standardized testing, and the narrow focus of effective school studies will continue. At this point, there has been no middle ground even considered. As long as there are researchers who do not support the use of standardized test these three debates will persist.

Summary

In the past twenty-years, effective school researchers have made considerable gains in resolving debates, controversy, and fears of educators relative to effective schools research. This progress has also advanced the whole of educational research. Researcher now have a clearer understanding on aspects that can improve schools, student achievement, and learning. Additionally, research methodology has been advanced through the struggles and strife.

The unresolved disputes will continue to improve effective schools research and educational research in general. This provides educational researchers with a healthy forum for

change and advancement of the field. The fostering of open channels of communications and debate is necessary for educational research and effective schools research to improve and make a difference. The resolved debates have illustrated this. There is no fear that the unresolved debates will have the same impact on educational research.

References

- Andrews, R. L., & Soder, R. (1985). Equity and excellence: The moral imperatives of compulsory schooling. Curriculum In Context, Summer, 6-12.
- Andrews, R. L., & Soder, R. (1987). Principal Leadership and student achievement. Educational Leadership, 44(6), 9-11.
- Brookover, W., Beady, C., Flood, P., Schweitzer, J., Wisenbaker, J. (1979). School social systems and student achievement schools can make a difference. New York: Praeger.
- Brookover, W. B., & Lezotte, L. W. (1979). Changes in school characteristics coincident with changes in student achievement. East Lansing: Institute for research on Teaching, Michigan State University. (Eric Reproduction Document No. ED 181 005).
- Burstein, L. (1980). The role of levels of analysis in the specification of education effects. In R. Dreeben & J. A. Thomas (Eds.) Issues of Microanalysis (p. 119-190). Cambridge, MA: Ballinger.
- Coleman, J., Campbell, E., Hobson, C., Partland, J., Mood, A., Weinfield, F., & York, R. (1966). Equality of educational opportunity. Washington, D. C.: U.S. Government Printing Office.
- Cronbach, L. J. (1982). Designing evaluations of educational

- and social programs. San Francisco: Jossey-Bass.
- Cuban, L. (1983). Effective schools: A friendly but cautionary note. Phi Delta Kappan, 64, 695-696.
- D'Amico, J. (1982). Each effective school may be one of a kind. Educational Leadership, 39, 61-62.
- Edmonds, R. (1979). Effective schools for the urban poor. Educational Leadership, 37, 15-24.
- Edmonds, R. (1981). Making public schools effective. Social Policy, 12, 56-60.
- Evans, R. L. (1988). A study of the relationships between principals' change styles, school socioeconomic context, and school effectiveness. Ph.D. Dissertation, University of New Orleans.
- Flanagan, J. C., & Cooley, W. W. (1966). Project talent: One year follow-up studies. Pittsburg: University of Pittsburg, Project Talent.
- Gray, J. (1981). School effectiveness research: Key issues. Educational Research, 24, 49-54.
- Hallinger, P., & Murphy, J. E. (1986). The social context of effective schools. American Journal of Education, 94, 328-355.
- Jencks, C. S., Smith, M., Ackland, H., Bane, M. J., Cohen, D., Gintis, H., Heyns, B., & Michelson, S. (1972). Inequality: A reassessment of the effects of family and schooling in America. New York: Basic.
- Lezotte, L. W. (1982). A response to D'Amico: Not a recipe

- but a framework. Educational Leadership, 39, 63.
- Madaus, G. F., Kellaghan, T., Rakow E. A., & King, D. J. (1979). The sensitivity of measures of school effectiveness. Harvard Educational Review, 49, 207-228.
- McMillan, J. H., & Schumacher, S. (1984). Research in education: A conceptual approach. Boston: Little, Brown.
- Newberg, N. A., & Glatthorn, A. A. (1982). Instructional leadership: Four ethnographic studies on junior high school principals. (Eric Document Reproduction No. ED 236 808).
- Phi Delta Kappa. (1980). Why do some urban schools succeed? Bloomington, IN: Authors.
- Ralph, J. H., & Fennessey, J. (1983). Science or reform: Some questions about the effective schools model. Phi Delta Kappan, 64, 689-694.
- Rowan, B., Bossert, S. T., & Dwyer, D. C. (1983). Research on effective schools: A cautionary note. Educational Researcher, 16(3), 24-31.
- Rutter, M., Maughon, B., Mortimore, P., Ouston, J., & Smith, A. (1979). Fifteen thousand hours: Secondary schools and their effects on children. Cambridge, MA: Harvard University Press.
- Schmitt, D. R. (1988a). Evaluation of effectiveness in six schools in a large urban school district. M.A. Thesis, University of New Orleans.

- Schmitt, D. R. (1988b). Evaluation of six school effectiveness programs. Paper presented at the annual meeting of the Mid-South Educational Research Association, Louisville, KY.
- Sirotnik, K. A., & Burstein, L. (1985). Measurement and statistical issues in multilevel research on schooling. Educational Administration Quarterly, 21, 169-185.
- Sowell, E. J., & Casey, R. J. (1982). Research methods in education. Belmont, CA: Wadsworth.
- Teddlie, C., Falkowski, C., Stringfield, S., Desselle, S., & Garvue, R. (1984). The Louisiana school effectiveness study: Phase two 1982-84. Baton Rouge, LA: Louisiana State Department of Education.
- Teddlie, C., Stringfield, S., & Suarez, S. (1985). Classroom interaction in effective and ineffective schools: Preliminary results from phase III of the Louisiana school effectiveness study. Journal of Classroom Interaction, 20(2), 31-37.
- Teddlie, C., Stringfield, S., Wimpelberg, R., & Kirby, P. (1987). Contextual differences in effective schooling in Louisiana. Paper Presented at the annual meeting of the American Educational Research Association, Washington, D.C.
- Thompson, B. (1986). Two reasons why multivariate methods are usually vital: An understandable reminder with concrete examples. Paper presented at the annual meeting

of the Mid-South Educational Research Association,
Memphis, TN.

Wellisch, J. B., MacQueen, A. H., Carriere, R. A., & Duck, G.
A. (1978). School management and organization in
successful schools. Sociology of Education, 51, 211-226.

Wimpelberg, R. K. (1986). Bureaucratic and cultural images in
the management of more and less effective schools. Paper
presented at the Annual meeting of the American
Educational Research Association, San Francisco, CA.

Weber, G. (1971). Inner-city children can be taught to read:
For successful schools. Washington D.C.: Council for
Basic Education.

Appendix A

Brookover, W., Beady, C., Flood, P., Schweitzer, J., Wisenbaker, J. (1979). School social systems and student achievement schools can make a difference. New York: Praeger.

Brookover, W. B., & Lezotte, L. W. (1979). Changes in school characteristics coincident with changes in student achievement. East Lansing: Institute for research on Teaching, Michigan State University. (Eric Reproduction Document No. ED 181 005).

Brookover, W., Beamer, L., Hathaway, D., Lezotte, L., Miller, S., Pasalacqua, J., & Tornatzky, L. (1982). Creating effective schools. Holmes Beach, FL: Learning Publications, Inc.

Brookover, W. B., Schweitzer, J. H., Schneider, J. M., Beady, C. H., Flood, P. K., & Weisenbaker, J. M. (1978). Elementary school climate and school achievement. American Educational Research Journal, 15, 301-318.